(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064643 A1

(51) International Patent Classification[7]: H01L 21/00, 21/20

(21) International Application Number: PCT/US2003/039355

(22) International Filing Date: 11 December 2003 (11.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:

US	PCT/US03/21918 (CIP)
Filed on	15 July 2003 (15.07.2003)
US	PCT/US03/21916 (CIP)
Filed on	15 July 2003 (15.07.2003)
US	10/413,691 (CIP)
Filed on	15 April 2003 (15.04.2003)
US	10/413,690 (CIP)
Filed on	15 April 2003 (15.04.2003)
US	10/413,913 (CIP)
Filed on	15 April 2003 (15.04.2003)

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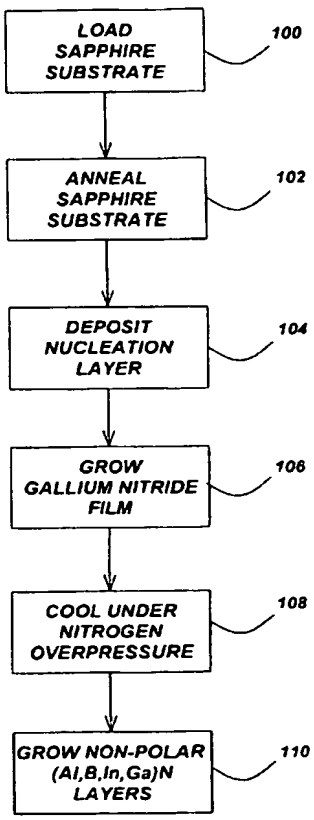
(54) Title: NON-POLAR (A1,B,In,Ga)N QUANTUM WELLS



(57) Abstract: A method of fabricating non-polar a-plane GaN / (A1,B,In,Ga)N multiple quantum wells (MQWs). The a-plane MQWs are grown on the appropriate GaN / sapphire template layers via metalorganic chemical vapor deposition (MOCVD) with well widths ranging from 20 Å to 70 Å. The room temperature photoluminescence (PL) emission energy from the a-plane MQWs followed a square well trend modeled using self-consistent Poisson-Schrodinger (SCPS) calculations. Optimal PL emission intensity is obtained at a quantum well width of 52 Å for the a-plane MQWs.

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(81) **Designated States** *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States** *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

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